

LISTING OF THE CLAIMS

The following listing of claims replaces all prior claim listings and versions in the application:

1. (Currently Amended) A sequence casting process for continuous production of a high-purity cast metal strand from a metal melt, the process comprising:
feeding the metal melt ~~in-controlled-fashion~~ from a melt vessel to a tundish; and
discharging the metal melt ~~in-controlled-fashion~~ from the tundish into a continuous-casting mold, the feeding of the metal melt into the tundish being interrupted during a change of melt vessel while the discharging of the metal melt into the continuous-casting mold is continued,

wherein during a first period of time starting from a resumption of the feeding of the metal melt into the tundish until a point at which a quasi-steady-state operation bath level in the tundish is reached, an inflow rate into the tundish is greater than an outflow rate out of the tundish, and such that for 70 % to 100 % of the first period of time the inflow rate into the tundish is less than or equal to double the outflow rate out of the tundish,

wherein the feeding of the metal melt into the tundish within the last 5 % to 30 % of the first period of time is continued and is performed at a reduced inflow rate compared with the inflow rate during a preceding time period of the first period of time such that by an end of the last 5% to 30% of the first period of time an unchanging filling rate of the tundish equal to a rate of the discharging of the metal melt from the tundish is attained.

2. (Previously Presented) The sequence casting process as claimed in claim 1, wherein the inflow rate into the tundish corresponds to at least 0.5 times a maximum inflow rate during quasi-steady-state casting operation.

3. (Canceled)

4. (Previously Presented) The sequence casting process as claimed in claim 1, wherein the feeding of the metal melt takes place at an initial filling rate that is a maximum inflow rate immediately on the resumption of the feeding of the metal melt into the tundish for 0.1 % to 30

% of the first period of time, and thereafter the feeding of the metal melt takes place at a filling rate which is reduced compared to the initial filling rate until an end of the first period of time.

5. (Currently Amended) The sequence casting process as claimed in claim 1, wherein the reduced filling inflow rate follows a time curve which decreases continuously ~~or decreases in steps~~.

6. (Previously Presented) The sequence casting process as claimed in claim 1, wherein the feeding of the metal melt into the tundish is interrupted for a second period of time during which the quasi-steady-state operation bath level is reached.

7. (Previously Presented) The sequence casting process as claimed in claim 6, wherein the second period of time lasts between 1 second and 2 minutes.

8. (Previously Presented) The sequence casting process as claimed in claim 1, wherein a region of a free bath surface in the tundish immediately surrounding a shroud is kept free of coverage with a covering agent at least during quasi-steady-state operation.

9. (Previously Presented) The sequence casting process as claimed in claim 6, wherein after the resumption of the feeding of the metal melt into the tundish, the feeding of the metal melt into the tundish is controlled quantitatively as a function of the discharge of the metal melt from the tundish.

10. (Previously Presented) The sequence casting process as claimed in claim 1, wherein the feeding of the metal melt into the tundish is controlled quantitatively as a function of the discharge of the metal melt from the tundish at least for 70% to 100% of the first period of time or from the point at which the quasi-steady-state operation bath level is reached.

11. (Previously Presented) The sequence casting process as claimed in claim 1, wherein a quantity of the metal melt fed to the tundish and a quantity of the metal melt discharged from the tundish during casting of a steel strip on a two-roller casting installation is between 0.5 t/minutes and 4.0 t/minutes.

12. (Previously Presented) The sequence casting process as claimed in claim 1, further comprising adding a covering agent onto a bath surface of the metal melt in the tundish on demand in a surface region with a low surface flow velocity, waviness of the bath surface or turbulence intensity.

13. (Previously Presented) The sequence casting process as claimed in claim 12, wherein the covering agent is added in fine-grain or powder form using a semi-automatic or a fully automatic addition device.

14. (Previously Presented) The sequence casting process as claimed in claim 1, further comprising setting and monitoring the quasi-steady-state operation bath level by means of a tundish weight measurement or by means of an equivalent measurement method.

15. (Currently Amended) The sequence casting process as claimed in claim 1, further comprising dividing by a divider plate at least during the first period of time the metal melt contained in the tundish into ~~[[two]]~~ a first partial quantity and a second partial quantities ~~quantity~~, the metal melt from the melt vessel being fed to ~~[[a]]~~ the first partial quantity and the metal melt being discharged from ~~[[a]]~~ the tundish from the second partial quantity into the continuous-casting mold, and the metal melt being transferred continuously from the first partial quantity to the second partial quantity,

wherein the inflow rate to the first partial quantity in the tundish ~~being~~ is greater than the outflow rate from the second partial quantity, and the inflow rate to the first partial quantity ~~being~~ is less than or equal to double the outflow rate from the second partial quantity for 70% to 100% of the first period of time.

16. (Canceled)

17. (Currently Amended) The sequence casting process as claimed in claim 15, wherein ~~the feeding of the~~ metal melt ~~takes place~~ is fed into the first partial quantity of the tundish at a maximum inflow rate immediately on the resumption of the feeding of the metal melt into the tundish for 1% to 30% of the first period of time, and thereafter the ~~feeding of the~~

metal melt ~~takes place~~ is fed at a filling rate ~~which is~~ reduced compared to the maximum inflow rate until ~~the~~ a point at which the quasi-steady-state operation bath level of the second partial quantity in the tundish is reached.

18. (Previously Presented) The sequence casting process as claimed in claim 15, further comprising transferring the metal melt from the first partial quantity to the second partial quantity through one or more openings in the divider plate.

19. (Previously Presented) The sequence casting process as claimed in claim 15, wherein the metal melt is transferred through a free space between the divider plate and a base of the tundish.

20. (Previously Presented) The sequence casting process as claimed in claim 15, wherein when a quasi-steady-state operation bath level of the second partial quantity of the metal melt in the tundish is reached, the feeding of the metal melt into the tundish is controlled quantitatively as a function of the discharge of the metal melt from the tundish.

21. (Previously Presented) The sequence casting process as claimed in claim 1, wherein the metal melt is a steel melt.

22. (Previously Presented) The sequence casting process as claimed in claim 1, wherein for 70 % to 99 % of the first period of time the inflow rate into the tundish is less than or equal to double the outflow rate out of the tundish.

23. (Previously Presented) The sequence casting process as claimed in claim 1, wherein for 70 % to 95 % of the first period of time the inflow rate into the tundish is less than or equal to double the outflow rate out of the tundish.

24. (Previously Presented) The sequence casting process as claimed in claim 23, wherein the inflow rate into the tundish is less than or equal to 1.5 times the outflow rate out of the tundish.

25. (Previously Presented) The sequence casting process as claimed in claim 1, wherein the feeding of the metal melt takes place at an initial filling rate that is a maximum inflow rate immediately on the resumption of the feeding of the metal melt into the tundish for 3 % to 15 % of the first period of time, and thereafter the feeding of the metal melt takes place at a filling rate which is reduced compared to the initial filling rate, until an end of the first period of time.

26. (Previously Presented) The sequence casting process as claimed in claim 6, wherein the second period of time lasts between 10 seconds and 70 seconds.

27. (Canceled)

28. (New) The sequence casting process as claimed in claim 15, wherein the inflow rate to the first partial quantity is less than or equal to double the outflow rate from the second partial quantity for 70% to 95% of the first period of time.

29. (New) A sequence casting method for continuous production of a high-purity cast metal strand from a metal melt, the method comprising:

feeding the metal melt from a melt vessel to a tundish; and

discharging the metal melt from the tundish into a continuous-casting mold, the feeding of the metal melt into the tundish being interrupted during a change of melt vessel while the discharging of the metal melt into the continuous-casting mold is continued,

wherein during a first period of time starting from a resumption of the feeding of the metal melt into the tundish until a point at which a quasi-steady-state operation bath level in the tundish is reached, an inflow rate into the tundish is greater than an outflow rate out of the tundish, and such that for 70 % to 100 % of the first period of time the inflow rate into the tundish is less than or equal to double the outflow rate out of the tundish,

wherein the feeding of the metal melt into the tundish within the last 5 % to 30 % of the first period of time is continued and is performed at a reduced inflow rate compared with the inflow rate during a preceding time period of the first period of time,

wherein the reduced inflow rate comprises a first rate having a first quantity/time slope and a second rate comprising a second quantity/time slope, the first slope being different from the second slope.

30. (New) The sequence casting method as claimed in claim 29, wherein the first slope is greater than the second slope.

31. (New) A sequence casting method for continuous production of a high-purity cast metal strand from a metal melt, the method comprising:

feeding the metal melt from a melt vessel to a tundish; and

discharging the metal melt from the tundish into a continuous-casting mold, the feeding of the metal melt into the tundish being interrupted during a change of melt vessel while the discharging of the metal melt into the continuous-casting mold is continued,

wherein during a first period of time starting from a resumption of the feeding of the metal melt into the tundish until a point at which a quasi-steady-state operation bath level in the tundish is reached, an inflow rate into the tundish is greater than an outflow rate out of the tundish, and such that for 70 % to 100 % of the first period of time the inflow rate into the tundish is less than or equal to double the outflow rate out of the tundish,

wherein the feeding of the metal melt into the tundish within the last 5 % to 30 % of the first period of time is continued and is performed at a reduced inflow rate compared with the inflow rate during a preceding time period of the first period of time,

dividing by a divider plate at least during the first period of time the metal melt contained in the tundish into a first partial quantity and a second partial quantity, the metal melt from the melt vessel being fed to the first partial quantity and the metal melt being discharged from the tundish from the second partial quantity into the continuous-casting mold, and the metal melt being transferred continuously from the first partial quantity to the second partial quantity,

wherein the inflow rate to the first partial quantity in the tundish is greater than the outflow rate from the second partial quantity, and the inflow rate to the first partial quantity is less than or equal to double the outflow rate from the second partial quantity for 70% to 100% of the first period of time.